



Application of “Lini Semina” in Medicine for the Treatment of Diseases of the Gastrointestinal Tract

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Annotation: The use of medicines based on medicinal plants in folk medicine will not lose its importance and special attention is paid to the use of these funds. Medicinal preparations based on flax seeds is an enveloping agent of plant origin, and we consider in this review Flax seeds produced by Pharmaceutical companies “ФармЛибет”.

Keywords: Flax seeds, flax seed, Lini semina, use in medicine, peptic ulcer, colitis, enterocolitis, inflammation of the esophagus, astringents.

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Introduction. The discoverer of the medicinal properties of flax seed was also Hippocrates, who told the world a recipe for a decoction of flax seeds that helps with stomach diseases. And in more recent times, flax seeds have found application in folk medicine due to their softening, cleansing and bactericidal properties [1, 3-4]. In the 80s of the last century, nutritionists from around the world began to actively and deeply study the properties of flaxseed as a natural and healthy product. Well, in the XXI century, flax seed has already begun to play a significant and important role in human dietary nutrition, thus taking part in the prevention and treatment of a number of diseases [1, 5-7]. This is confirmed by the data: In Germany, more than 60,000 tons of flax seed are used in the baking industry annually (on average, this is about 1 kg per 1 person per year). And in Canada, flax seed is no longer considered as a food additive, but as a separate food product, and therefore a special National program has been adopted that recommends the inclusion of up to 12% of flax seeds in bakery products [1, 8-10].

Materials and methods of research. The materials of this study are medicinal plants Common flax, a medicinal substance belonging to the group of medicinal plants and raw materials containing fatty oils.

Chemical composition. Flax seeds contain mucus, fatty oil, protein substances, vitamin A, organic acids, glycoside linamarin and other biologically active substances.

The results of the study. Linseed oil is obtained by hot pressing from crushed seeds. The color of the oil is light yellow with a brownish tinge, the smell is characteristic, the taste is pleasant [1, 11-12]. The oil consists mainly of two-, three-acid triglycerides of oleic, linoleic and linolenic acids. The acid number is no more than 5. The oil content in the seeds depends on the type of flax, growing areas and soil and climatic conditions, therefore it varies widely - from 24 to 44%. Even greater diversity is observed in the composition of the oil: as crops move from north to south, the amount of linoleic (from 60 to 25%) and linolenic (from 45 to 20%) acids decreases in the composition of triglycerides. In

accordance with this, the value of the iodine number also fluctuates: oil from the northern regions has a higher iodine number [2, 13-14].

For a long time, the use of linseed oil in medical practice was limited to the preparation of liniment for burns. The discovery of the ability of polyunsaturated fatty acids to accelerate the breakdown and remove lipids from the body immediately and dramatically increased the medicinal value of linseed oil [2, 15-16]. Moreover, it turned out that polyunsaturated fatty acids are biologically starting substances for the biosynthesis of prostaglandins in the human and animal body, which exhibit a variety of physiological effects. Linseed oil is used to produce linetol, which is a mixture of ethyl esters of linoleic (about 15%), linolenic (about 57%), oleic (about 15%) acids; the remaining amount falls on marginal acids [2, 17-18]. Esterification of fatty acids improves the organoleptic properties of the oil; the drug is better tolerated. Linetol is used for atherosclerosis and as an ointment externally for burns, radiation lesions and other skin diseases [2, 19-20].

The composition of flaxseed includes three types of valuable polyunsaturated fatty acids (Omega-3, Omega-6 and Omega-9), the correct balance of which is necessary for all processes of the human body. In terms of Omega-3 content, flax seeds surpass all edible vegetable oils (this acid in flax seed is 3 times more than in fish oil) [1, 21-22].

The amino acid composition of flaxseed protein is similar to the composition of vegetable soy proteins, famous for their nutritional value. Flax seeds are an excellent source of plant fiber, the increased content of which in products helps to reduce the risk of cancer and has a positive effect on immunity [1, 23-24]. Due to the high content of polysaccharides, a decoction from flax seeds has an enveloping and bactericidal effect in gastritis and stomach ulcers [1, 25-26].

Lignans ("Plant hormones"), which are 100 times more in flax seeds than in other plant products, are well known as antioxidants that prevent the development of cancer. They also have antibacterial and antiviral effects [1, 27-28].

Vitamins F, A, E, B. Flax seeds are an excellent external source of vitamin F, which is important for the body and is actively involved in fat and cholesterol metabolism (this vitamin is not synthesized in the body). Vitamins A and E ("vitamins of youth") they have a beneficial effect on the skin - it is thanks to them that flaxseeds have found application in many cosmetic recipes [1, 29-30].

In addition, flax seeds are an important source of selenium, which, in turn, prevents the development of tumors, cleanses the body of heavy metals, helps to improve vision and brain activity. Flax seed is also rich in lecithin, which is so useful for humans [1, 31-32].

In diseases of the digestive system, a decoction of flax seeds, due to its enveloping and softening effect, has a protective effect on the mucous membrane of the esophagus and stomach, and can be used to treat stomach ulcers and gastritis. Fiber, which is rich in flax seeds, activates primarily the activity of the intestine, helping a person to cope with chronic constipation. Such a "laxative" effect of flax seeds is due to the fact that, swelling in the intestine, they increase the volume of intestinal contents and thus stimulate its emptying. Daily intake of 50 grams of flax seeds for two weeks is an effective means of folk medicine for the treatment of intestinal diseases, even in elderly people with weak immunity. Regular consumption of flax seeds helps to significantly improve liver function, significantly inhibits the absorption of toxins, and helps to cleanse the body of toxins [1, 33-34].

In cardiovascular diseases, flax seeds contain a large amount of Omega-3 polyunsaturated fatty acid, the presence of which in the body helps to reduce cholesterol levels in the blood and blood pressure. This has found application in the prevention and treatment of atherosclerosis, stroke, heart attack, thrombosis and other disorders of the cardiovascular system [1, 35-36].

In oncological diseases, flax seeds contain two important components that reduce the risk of hormone-dependent cancers - these are Omega-3 acid and “plant hormones” lignans [1, 37-38].

In diabetes mellitus, flax seeds have an enhancing effect of insulin, and are also used in the prevention and treatment of diabetes [1, 39-40].

In inflammatory diseases, omega-3 contained in flax seeds increases the overall immunity of the body, which prevents the occurrence and development of inflammatory processes. Linseed compresses soften boils and boils, are used in the treatment of joint diseases, and flax seed tinctures are used in the treatment of inflammatory processes in the mouth and throat [1, 41-43].

To cleanse the body of radionuclides, flax seeds are considered a powerful sorbent, in their properties not inferior to activated carbon, and unlike artificial sorbents does not affect the destruction of body cells. This is the basis for its use in the treatment of patients with radiation sickness [1, 44-46].

In folk medicine, flax seed is known as a good expectorant. Regular consumption of flax seed relieves asthma attacks and facilitates the course of allergic diseases, improves kidney and thyroid functions, normalizes hormonal balance in a woman's body [1, 47-49].

Conclusions. From the above information, we conclude that the drug produced by pharmaceutical companies “ФармаЦвет” has a number of useful properties for the gastrointestinal tract of the human body. The infusion of flax seeds has an enveloping, anti-inflammatory and mild laxative effect. Flax seeds swollen in water have a laxative effect. The prospects for further research are related to the search for new properties and to create modern dosage forms with additional pharmacological properties of the medicinal plant.

1. <https://pharmatsvet.ru/products/lina-semena/#:~:text=%D0%91%D0%BB%D0%B0%D0%B3%D0%BE%D0%B4%D0%B0%D1%80%D1%8F%20%D1%81%D0%BE%D0%B4%D0%B5%D1%80%D0%B6%D0%B0%D0%BD%D0%B8%D1%8E%20%D0%BB%D0%B5%D1%87%D0%B5%D0%B1%D0%BD%D0%BE%D0%B9%20%D1%81%D0%BB%D0%B8%D0%B7%D0%B8%2C%20%D1%81%D0%BF%D0%BE%D1%81%D0%BE%D0%B1%D0%BD%D0%BE%D0%B9,%D0%BA%D0%BE%D0%BB%D0%B8%D1%82%D0%B0%2C%20%D1%8D%D0%BD%D1%82%D0%B5%D1%80%D0%BE%D0%BA%D0%BE%D0%BB%D0%B8%D1%82%D0%B0%2C%20%D0%B2%D0%BE%D1%81%D0%BF%D0%B0%D0%BB%D0%B5%D0%BD%D0%B8%D0%B8%20%D0%BF%D0%B8%D1%89%D0%B5%D0%B2%D0%BE%D0%B4%D0%B0>
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